Third Grade New Math Core Compared to the Old Math Core

DRAFT 9.10.07

Common to Both (Based on New Language)	New Core Only	Old Core Only
Standard I: Students will understand the base-ten numeration system, place value concepts, simple fractions and perform operations with whole numbers. **Objective 1: Represent whole numbers up to 10,000, comprehend place value concepts, and identify relationships among whole numbers using base-ten models and symbolic notation.** • Read, write, and represent whole numbers using standard expanded from. • Demonstrate multiple ways to represent numbers using models and symbolic representations (e.g., fifty is the same as two groups of 25, the number of pennies in five dimes, or 75 – 25). • Identify the place and the value of a given digit in a four-digit numeral. • Order and compare whole numbers on a number line and use the symbols <, >, ≠, and = when comparing whole numbers. • Identify factors and multiples of whole numbers.	• Round numbers to the nearest ten, hundred, and thousands. • Identify factors and multiples of whole numbers.	• Use a variety of strategies to determine whether a number is even or odd. • Identify the number that is ten more, ten less, 100 more, or 100 less than any whole number up to 1,000. • Compare the relative size of numbers.
Objective 2: Use fractions to describe and compare parts of the whole. • Identify the denominator of a fraction as the number of equal parts of the unit whole and the numerator of a fraction as the number of equal parts being considered. • Define regions and sets of objects as a whole and divide the whole into equal parts using a variety of objects, models, and illustrations. • Name and write a fraction to represent a portion of a unit whole for halves, thirds, fourths, sixths, and eighths.	• Place fractions on the number line and compare and order fractions using models, pictures, the number line, and symbols. • Find equivalent fractions using concrete and pictorial representations.	

Objective 3: Model problems involving addition, subtraction, multiplication, and division. • Demonstrate the meaning of multiplication and division of whole numbers through the use of a variety of representations (e.g., equal-sized groups, arrays, area models, and equal jumps on a number line for multiplication, partitioning and sharing for division). • Use a variety of strategies and tools, such as repeated addition or subtraction, equal jumps on the number line, and counters arranged in arrays to model multiplication and division problems. • Demonstrate, using objects, that multiplication and division by the same number are inverse operations (e.g., 3 x □ = 12 is the same as 12 ÷ 3 = □ and □ = 4). • Demonstrate the effect of place value when multiplying whole numbers by 10. • Write a story problem that relates to a given addition, subtraction, or multiplication equation, and write a number sentence to solve a problem related to the students' environment.		• Model addition and subtraction of two- and three-digit whole numbers in a variety of ways.
Objective 4: Compute and solve problems involving addition and subtraction of 3- and 4-digit numbers and basic facts of multiplication and division. • Use a variety of methods to facilitate computation (e.g., estimation, mental math strategies, paper and pencil). • Find the sum or difference of number, including monetary amounts, using models and strategies such as expanded form, compensation, partial sums, and the standard algorithm. • Compute basic multiplication facts (0-10) and related division facts using a variety of strategies based on properties of addition and multiplication (i.e., commutative, associative, identify, zero, and the distributive properties).	• Compute division facts.	

Standard II: Students will use patterns, symbols, operations, and properties of addition and multiplication to represent and describe simple number relationships. **Objective 1: Create, represent, and analyze growing patterns.** • Create and extend growing patterns using objects, numbers, and tables. • Describe how patterns are extended using manipulatives, pictures, and numerical representations.		• Repeating patterns. • Record results of patterns created using manipulatives pictures, and numeric representations.
Objective 2: Recognize, represent, and simplify number relationships using symbols, operations, and properties. • Solve equations involving equivalent expressions (e.g., 6 + 4 = Δ + 7). • Use the >, <, and = symbols to compare two expressions involving addition and subtraction (e.g., 4 + 6 □ 3 + 2; 3 + 5 □ 16 – 9). • Recognize and use the commutative, associative, distributive, and identity properties of addition and multiplication, and the zero property of multiplication.	• Represent numerical relationships as expressions, equations, and inequalities. • Distributive property.	• Recognize that symbols in an addition, subtraction, or multiplication equation represent a value that will make the statement true.
Standard III: Students will describe and analyze attributes of two-dimensional shapes. **Objective 1: Describe and compare attributes of two-dimensional shapes.** • Identify, describe, and classify polygons (e.g., pentagons, hexagons, octagons). • Identify right angles in geometric figures, or in appropriate objects, and determine whether other angles are greater or less than a right angle.	• Identify attributes for classifying triangles (e.g., two equal sides for the isosceles triangle, three equal sides for the equilateral triangle, right angle for the right triangle). • Identify attributes for classifying quadrilaterals (e.g., parallel sides for the parallelogram, right angles for the rectangle, equal sides and right angles for the square).	• Identify and draw points, lines, line segments, and endpoints. • Identify and draw lines of symmetry on triangles, squares, circles, and rectangles. • Terminology of angles (obtuse and acute). • Identify, make, and describe cubes.
Objective 2: Demonstrate the meaning of congruence through applying transformations. • Demonstrate the effect of reflection, translation, or rotation using objects. • Determine whether two polygons are congruent by reflecting, translating, or rotating one polygon to physically fit on top of the other.		• Identify two-dimensional shapes (nets) that will fold to make a cube. • Create a polygon that results from combining other polygons.

		Objective 2: Describe spatial relationships. • Give directions to reach a location. • Use coordinates or regions to locate positions on a map. • Demonstrate and use horizontal and vertical lines.
Standard IV: Students will select and use appropriate units and measurement tools to solve problems. **Objective 1: Select and use appropriate tools and units to estimate and measure length, weight, capacity, time, and perimeter of two-dimensional figures.** • Describe the part-whole relationships (e.g., 3 feet in a yard, a foot is 1/3 of a yard) between metric units of length (i.e., centimeter, meter), and among customary units of length (i.e., inch, foot, yard), capacity (i.e., cup, quart), and weight (i.e., pound, ounce). • Measure the length of objects to the nearest centimeter, meter, half- and quarter-inch, foot, and yard. • Measure capacity using cups and quarts, and measure weight using pounds. • Identify the number of hours in a day, the number of days in a year, and the number of weeks in a year. • Describe perimeter as a measurable attribute of two-dimensional figures, and estimate and measure perimeter with metric and customary units.	• Measure weight using ounces. • Identify the number of minutes in an hour.	• Determine the value of a combination of coins and bills that total $5.00 or less and write the monetary amounts using the dollar sign and decimal notation. • Read, tell, and write time to the quarter-hour. • Identify any given day of the month. • Read and record the temperature to the nearest ten degrees using a Fahrenheit thermometer.
	Objective 2: Solve problems involving measurements. • Determine simple equivalences of measurements (e.g., 30 inches = 2 feet and 6 inches; 6 cups = 1 ½ quarts; 90 min. = 1 hr. 30 min.). • Compare given objects according to measurable attributes (i.e., length, weight, capacity). • Solve problems involving perimeter. • Determine elapsed time in hours (e.g., 7:00 a.m. to 2:00 p.m.).	

Standard V: Students will collect and organize data to make predictions and identify basic concepts of probability. **Objective 1: Collect, organize, and display data to make predictions.** • Collect, read, represent, and interpret data using tables, graphs, and chart, including keys (e.g., pictographs, bar graphs, frequency tables, line plots). • Make predictions based on a data display.		
Objective 2: Identify basic concepts of probability. • Describe the results of events using the terms "certain," "likely," "unlikely," and "impossible." • Conduct simple probability experiments, record possible outcomes systematically, and display results in an organized way (e.g., chart, graph). • Use results of simple probability experiments to describe the likelihood of a specific outcome in the future.	• Terminology with "likely" and "unlikely"	• Terminology with "equally likely"